Roll No. ..... **Total No. of Pages : 2**

PC 11433-NH

AS/2111

PHYSICAL CHEMISTRY (CHEB 1103T)

Semester—I

Time Allowed : 3 Hours] [Maximum Marks : 26

Note :— Candidates are required to attempt ***two*** questions each (**4** marks each) from Sections A and B. Section C is compulsory (**2** marks each question).

SECTION—A

1. Differentiate the following functions w.r.t. x :

   (i) ax^2+bx+c

   (ii) sin 2x

   (iii) log(ax).

2. Find the probability of turning for at least once in two tosses of a fair die.

3. Discuss types of errors.

4. Explain the physical meaning of precision and accuracy, confidence limit and mean and median. 2×4=8

SECTION—B

5. Describe the structure of liquid crystals.

6. Write a short note on liquefication of gases.

7. Explain dipole moment and discuss various methods for its determination.

8. Write notes on :

   (a) Thermography

   (b) Postulates of kinetic theory of gases. 2×4=8

SECTION—C

9. (a) How many permutations of the letter of the word APPLE are there ?

   (b) What do you mean by deviations from mean ?

   (c) What are nematic liquid crystal ?

   (d) Define root mean square velocity and mean free path.

   (e) Discuss ferromagnetism. 5×2=10